DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed on 05/06/2011have been fully considered but they are not persuasive.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See In re Fine, 837 F.2d 1071,5 USPQ2d 1596 (Fed. Cir. 1988) and In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir.1992). In this case, the Examiner very kindly directs the Applicant to Sato e.g., ¶ [0014], ¶ [0015], ¶ [0026], ¶ [0034], ¶ [0059], ¶ [0068], ¶ [0072], ¶ [0073], ¶ [0077], ¶ [0102], ¶ [0103], Figs. 1-4, 7-10, that the object of Sato is to introduce a method of invention providing a multicast service from an information delivery apparatus to wireless terminals through wireless routes. The method includes the step of transmitting, from the information delivery apparatus, **a plurality of sets of multicast information**, wherein these **sets are identical to each other as to contents thereof but differ in transmission conditions**. The method further includes the step of receiving, at any given one of the wireless terminals, one of the sets of multicast information being transmitted under **one of the differing transmission conditions**. Sato further teaches that these **transmission conditions are defined for the transmission of multicast information to the wireless**

terminals, and are of such a **nature as affecting the reception quality of each wireless terminal**. On the other hand, in an analogous field of endeavor, Varma is relied upon for the subsequent transmitter behavior corresponding to at least two non-contiguous ones of the quality ranges is identical (See Varma e.g., non-contiguous states, assigned indexes corresponding to a particular set of wireless link parameters of Page 5 table line and wireless parameters, Col. 6:55-61, Figs. 3, 6,), wherein the subsequent transmitter behavior includes adjusting at least one transmitter parameter of the first station such that the at least one transmitter parameter corresponding to the at least two non-contiguous ones of the quality ranges is identical (See Varma e.g., dynamic adaption of non-contiguous states (lines) 21, 23 etc. with identical parameters such as High symbol rate (HSR), Low symbol rate (LSR) , and Forward error correction (FEC) of Page 5 table regarding line and wireless link parameters, Col. 4:34-67, Col. 5:1-30, Figs. 3, 6), and wherein the data packets falling into one quality range directly influence concurrent or subsequent retransmission decisions regarding the data packets falling into another quality range (See Varma e.g., determining measure of errors, comparing to thresholds, and the relationship for a first set of wireless link parameters intersecting the relationship for a second set of wireless link parameters, i.e., communication changing between a multiple set of wireless link parameters according to the error tolerance of wireless link parameters of Col. 5:49-67, Col. 6:1-14,Figs. 4-5).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teachings of Varma to Sato for the purpose of dynamically adapting a set of wireless link parameters that provides a better

selection of throughput as well as adapting more efficiently to changes in communication conditions as suggested (See Varma e.g., Col. 1:46-51).

One cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. In re Keller, 642 F.2d 413, 20 USPQ 871 (CCPA 1981); In re Merck & Co., Inc., 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Therefore, the previous rejection is maintained.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1, 11, 16 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The amended **claims 1, 15, and 19** recite the limitation, "wherein the data packets falling into one quality range **"directly"** influence concurrent or subsequent retransmission decisions regarding the data packets falling into another quality range", the underlined term is not recited or stated anywhere in the submitted specification. Thus the claims contain new matter. The specification does disclose the method comprising the first station transmitting a data packet and at least one of the plurality of the second stations receiving the data packet, characterized by the at least one of the

plurality of second stations measuring the quality of reception of the received data packet, and determining into which one of at least three predetermined quality ranges the measured quality falls, wherein the first station adopts a respective subsequent transmitter behavior in response to each of the at least three predetermined quality ranges and wherein the subsequent transmitter behavior corresponding to at least two non-contiguous ones of the quality ranges is identical (See e.g., ¶ [0006]).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sato (US Pub. No. 2002/0003798 A1) in view of Varma (US Pat. 7,88,919 B2).

Regarding **claims 1, 15, and 19**, Sato teaches a method of operating a packet data multicast communication system comprising a first station and a plurality of second stations (See Sato e.g., a base station transmitting multicast information to a plurality of wireless terminals Figs. 1, 4, ¶ [0014]), the first and second stations having transceiving equipment for communication between the first and second stations (See Sato e.g., communication between the a base station and the wireless terminals Figs. 1, 4, ¶ [0015]), the method comprises the first station transmitting a data packet and at least one of the plurality of the second stations receiving the data packet (See Sato e.g., the multicast service of Figs. 1, 4, ¶ [0014], ¶ [0015]), wherein the at least one of the

plurality of the second stations measuring the quality of reception of the received data packet (See Sato e.g., measuring reception quality at the wireless terminals Figs. 1, 4, ¶ [0026], ¶ [0034]), and determining into which one of at least three predetermined quality ranges the measured quality falls, wherein the first station adopts a respective subsequent transmitter behavior in response to each of the at least three predetermined quality ranges (See Sato e.g., the base station with a plurality of transmission rates or schemes based on measurements Fig. 10, ¶ [0102], ¶ [0103]).

Sato further teaches that the wireless terminals measure the reception quality of signals received from the base station (See Sato e.g., measuring reception quality at the wireless terminals Figs. 7-9, ¶ [0102]]). Sato further teaches receiving multicast information by using different transmission conditions (See Sato e.g., spreading codes, modulation schemes, and identification of time slots etc. Figs. 7-9, ¶ [0102], ¶ [0103]). However, Sato does not explicitly teach that the subsequent transmitter behavior corresponding to at least two non-contiguous ones of the quality ranges is identical , wherein the subsequent transmitter behavior includes adjusting at least one transmitter parameter of the first station such that the at least one transmitter parameter corresponding to the at least two non-contiguous ones of the quality ranges is identical, and wherein the data packets falling into one quality range directly influence concurrent or subsequent retransmission decisions regarding the data packets falling into another quality range.

In analogous field of endeavor, Varma teaches the subsequent transmitter behavior corresponding to at least two non-contiguous ones of the quality ranges is

identical (See Varma e.g., non-contiguous states, assigned indexes corresponding to a particular set of wireless link parameters of Page 5 table line and wireless parameters, Col. 6:55-61, Figs. 3, 6,), wherein the subsequent transmitter behavior includes adjusting at least one transmitter parameter of the first station such that the at least one transmitter parameter corresponding to the at least two non-contiguous ones of the quality ranges is identical (See Varma e.g., dynamic adaption of non-contiguous states (lines) 21, 23 etc. with identical parameters such as High symbol rate (HSR), Low symbol rate (LSR) , and Forward error correction (FEC) of Page 5 table regarding line and wireless link parameters, Col. 4:34-67, Col. 5:1-30, Figs. 3, 6), and wherein the data packets falling into one quality range directly influence concurrent or subsequent retransmission decisions regarding the data packets falling into another quality range (See Varma e.g., determining measure of errors, comparing to thresholds, and the relationship for a first set of wireless link parameters intersecting the relationship for a second set of wireless link parameters, i.e., communication changing between a multiple set of wireless link parameters according to the error tolerance of wireless link parameters of Col. 5:49-67, Col. 6:1-14,Figs. 4-5).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teachings of Varma to Sato for the purpose of dynamically adapting a set of wireless link parameters that provides a better selection of throughput as well as adapting more efficiently to changes in communication conditions as suggested (See Varma e.g., Col. 1:46-51).

Regarding **claim 2**, the combination teaches everything claimed as discussed above in the rejected claim 1. Further, Sato teaches that the method characterized by the second station transmitting indicia representative of the quality ranges other than said at least two non-contiguous quality ranges (See Sato e.g., spreading codes, modulation schemes, and identification of time slots etc. of Figs. 7-9, ¶ [0102], ¶ [0103]).

Regarding **claim 3**, the combination teaches everything claimed as discussed above in the rejected claim 2. Further, Sato teaches that the method characterized by the second station transmitting the indicia representative of the quality ranges in respect of each of the at least two non-contiguous quality ranges (See Sato e.g., spreading codes, modulation schemes, and identification of time slots etc. of Figs. 7-9, ¶ [0072], ¶ [0102], and ¶ [0103]).

Regarding **claim 4**, the combination teaches everything claimed as discussed above in the rejected claim 1. Further, Sato teaches that the method characterized in that the at least two non-contiguous quality ranges are the best and the worst quality ranges (See Sato e.g., a plurality of transmission rates T1-T5 of Figs. 10, 15).

Regarding **claims 5, 16, 20**, the combination teaches everything claimed as discussed above in the rejected claims 1, 15, 19. Further, Sato teaches that the method wherein the measuring of the quality of reception of the received data packet is characterized by comparison of a measure of a predetermined quality metric of a received signal with at least three quality ranges (See Sato e.g., a plurality of transmission rates T1-T5, modulation schemes of Figs. 10, 15).

Regarding **claim 6**, the combination teaches everything claimed as discussed

above in the rejected claim 5. Further, Sato teaches that the method characterized in that the quality ranges are defined by threshold values applied by respective second stations (See Sato e.g., reception quality predetermined levels, ¶ [0073]).

Regarding **claim 7**, the combination teaches everything claimed as discussed above in the rejected claim 5. Further, Sato teaches that the method characterized in that the quality ranges are defined by threshold values signaled to the second stations by the first station (See Sato e.g., reception quality predetermined levels for the wireless terminals of ¶ [0073]).

Regarding **claim 8**, the combination teaches everything claimed as discussed above in the rejected claim 5. Further, Sato teaches that the method characterized in that the predetermined quality metric comprises at least one of: Eb/N0 (energy per bit/noise density); the number of data packets received successfully in a predetermined time window; the proportion of data packets previously received correctly out of a group of predetermined number of packets; and the received SIR (Signal to Interference Ratio) or SNR (Signal to Noise Ratio) of another received signal (See Sato e.g., reception level, an interference level, and an error rates etc., of ¶ [0059]).

Regarding **claim 9**, the combination teaches everything claimed as discussed above in the rejected claim 8. Further, Sato teaches that the method characterized in that the quality of reception of the received data packet is determined during a predetermined duration (See Sato e.g., a predetermined time period for reception of multicast information of ¶ [0068]).

Regarding **claims 10, 17**, the combination teaches everything claimed as

discussed above in the rejected claims 1, 15. Further, Sato teaches that the method characterized in that the first station adjusts one or more transmission parameters to ensure that at least a predetermined percentage of secondary stations receive a data packet data service satisfactorily (See Sato e.g., selection of spreading codes, modulation schemes, and identification of time slots etc., of ¶ [0077]).

Regarding **claims 11, 18**, the combination teaches everything claimed as discussed above in the rejected claims 10, 17. Further, Sato teaches that the method characterized in that the transmission parameters comprise one or more of: number of retransmissions; transmit power; spreading factor; code rate; and modulation scheme (See Sato e.g., selection of spreading codes, modulation schemes, and identification of time slots transmission rates etc., of ¶ [0077]).

Regarding **claim 12**, the combination teaches everything claimed as discussed above in the rejected claim 2. Further, Sato teaches that the method characterized in that different of the indicia are distinguished by transmission at different times (See Sato e.g., selection of spreading codes, modulation schemes, and identification of time slots transmission rates etc., of ¶ [0102]).

Regarding **claim 13**, the combination teaches everything claimed as discussed above in the rejected claim 2. Further, Sato teaches that the method characterized in that different of the indicia are distinguished by different code words (See Sato e.g., selection of spreading codes, modulation schemes, and identification of time slots transmission rates etc., of ¶ [0077]).

Regarding **claim 14**, the combination teaches everything claimed as discussed

above in the rejected claim 2. Further, Sato teaches that the method characterized in that different of the indicia are distinguished by different frequency channels (See Sato e.g., selection of spreading codes, modulation schemes, and identification of time slots transmission rates etc., of ¶ [0077]).

Conclusion

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BABAR SARWAR whose telephone number is (571)270-5584. The examiner can normally be reached on MONDAY TO FRIDAY 08:00 AM -04:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, NICK CORSARO can be reached on (571)272-7876. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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